

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-317356
(43)Date of publication of application : 03.12.1993

(51)Int. Cl. A61F 13/15
A61F 5/44

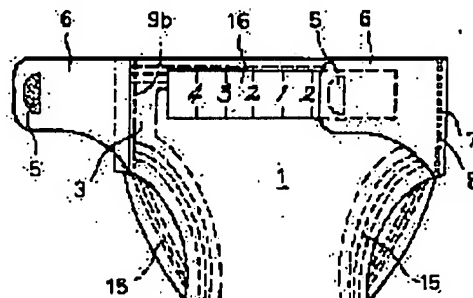
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(54) DISPOSABLE DIAPER

(57)Abstract:

PURPOSE: To make the method of use of a diaper choosable between a pant type whereby the opposite side portions of the diaper are joined together and an open type whereby the opposite side portions are joined by means of fastening pieces.

CONSTITUTION: A diaper comprises front and rear bodies 1, 2 integrally joined at their respective opposite side portions 3, 4 to the base portion 7 of each fastening piece 6 and a cutting line 9b provided in the portion of the front body 1 near the joint 8 in order to cut the opposite side portion of the front body 1 from the rear body.



LEGAL STATUS

[Date of request for examination] 07.05.1997
[Date of sending the examiner's decision of rejection]
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]
[Date of final disposal for application]
[Patent number] 3096152
[Date of registration] 04.08.2000
[Number of appeal against examiner's decision of rejection]
[Date of requesting appeal against examiner's decision of rejection]

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(19)日本国特許庁(JP)

(12)公開特許公報(A)

(11)特許出願公開番号

特開平5-317356

(43)公開日 平成5年(1993)12月3日

(51)Int.Cl.

識別記号

片内整理番号

FI

技術表示箇所

A61F 13/15

5/44

H 7807-4C

2119-3B

A41B 13/02

A

審査請求 未請求 請求項の数2(全5頁)

(21)出願番号 特願平4-130935

(22)出願日 平成4年(1992)5月22日

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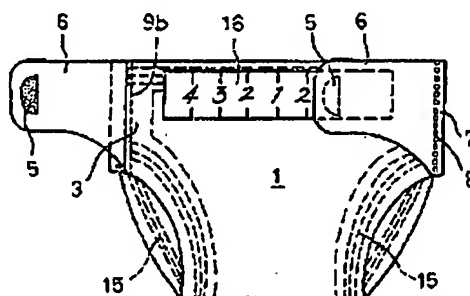
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(54)【発明の名称】 使い捨てオムツ

(57)【要約】

【目的】 オムツの対向側部を接合したパンツ型又はその対向側部を締結片で接合する開放型のいずれかの使用方法を選択可能とする。

【構成】 前後身頃1, 2の対向側部3, 4と各締結片6の基端部7とを一体に接合し、その接合部8の近傍における前身頃1にその対向側部を後身頃のそれから切り離すための切断線9bを設けたオムツ。



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【特許請求の範囲】

【請求項1】 前身頃と後身頃とが互いにこれらの長さ方向に連続し、該前後身頃の一方の胴回り対向側部に外側へ延出する締結片を有する使い捨てオムツにおいて、前記前後身頃の胴回りの対向側部を互いに重ね合せ、更に先端部の内面に係着部を設けた各締結片の基部部を前記前身頃の胴回り対向側部にそれぞれ重ね合せ、これら重ね合せ部を一体に接合し、これら接合部よりも内側であってこれら接合部にそれぞれ近接する前記前身頃の部位にはこれら接合部に沿って前記前身頃を前記後身頃から切り離すための切断線を設けてあり、前記前後身頃どうしの前記接合部の剥離強度を1000g/インチ以上になしてあることを特徴とする前記オムツ。

【請求項2】 前記接合部の接合は融着でなし、前記切断線は間欠的切り込み又は孔で形成してある請求項1に記載のオムツ。

【発明の詳細な説明】

【0001】

【産業上の利用分野】 この発明は、使い捨てオムツに関する。更に詳しくは、胴回りを予め環状に連結してあるパンツ型のオムツ又は着用時に胴回りを締結片で環状に連結する開放型のオムツとしてのいずれかの着用方法を選択できる使い捨てオムツに関する。

【0002】

【従来の技術】 実開平4-5826には、使い捨てオムツであって、前後身頃の胴回り対向側部の一方を予め接合しておき、その他方をテープファスナーで開閉可能に接合するようにしたものが開示されている。又、特開平4-89050には、使い捨てオムツであって、前後身頃の胴回り対向側部の少なくとも一方を粘着テープで開閉可能にしたものが開示されている。

【0003】

【発明が解決しようとする課題】 実開平4-5826に記載のオムツは、オムツの幅方向対向側部の一方を常に閉じた構成にしてあるから、着用者の起立及び横臥のいずれの状態でもおむつを着用者に着用させるのに不便である。又、特開平4-89050に記載のオムツでは、オムツの胴回り対向側部のうち開閉可能な側部は、最初から（オムツの製造時から）粘着テープで接合してあるにすぎないから、胴回りを連結してある通常のパンツと同様にその胴開口を任意に広げながらオムツを着用者に着用させるとき、不用意に開いてしまい、パンツの胴回り対向側部を予めパンツ型に連結した構成にした効果が半減するおそれがある。

【0004】 この発明の課題は、着用の際に胴開口部を任意に広げてもその対向側の接合部が破いてしまわないように、オムツの製造時からその対向側部を接合しておき、それにもかかわらず、必要に応じてその接合部を離し再び接合できるようにその対向側部を構成することにある。

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【0005】

【課題を解決するための手段】 この発明は、前身頃と後身頃が互いにこれらの長さ方向に連続し、該前後身頃の一方の胴回り対向側部に外側へ延出する締結片を有する使い捨てオムツを前提とし、次の点を特徴とする。

【0006】 即ち、前記前後身頃の胴回り対向側部を互いに重ね合せ、更に先端に係着部を設けた各締結片の基部部を前記前身頃の胴回り対向側部にそれぞれ重ね合せ、これら重ね合せ部を一体に接合し、これら接合部よりも内側であってこれら接合部にそれぞれ近接する前記前身頃の部位にはこれら接合部に沿って前記前身頃を前記後身頃から切り離すための切断線を設けてあり、前記前後身頃の接合部の剥離強度を1000g/インチ以上になしてある点。

【0007】 好ましい実施例では、前記接合部の接合は融着でなし、前記切断線は間欠的切り込み又は孔で形成してある。

【0008】

【作用】 オムツの対向側部又はその一方を離してオムツを開放型にすると、前記切断線において前記前身頃の対向側部を前記後身頃のそれから切り離すことができる。こうして切り離した前記前身頃は、前記後身頃の対向側から延出する締結片を介して前記後身頃に連結することができる。

【0009】

【実施例】 図示例を参照してこの発明の実施例を説明すると、以下のとおりである。

【0010】 図1～図5において、オムツは前後身頃1、2が互いにこれらの長さ方向に連続している。前後身頃1、2の胴回りの対向側部3、4を重ね合せ、更に先端部の内面に係着部としての粘着部5を設けた締結片6の基部部7を重ね合せ、これら重ね合せ部を加熱下又は超音波作用下にこれら重ね合せ部の側縁を残しこの側縁に沿って間欠的に一体に融着接合してあり、符号8はその接合部を示す。接合部8に近接する前身頃1の部位9aには、前身頃1を引っ張って後身頃2から切り離すことができるように、接合部8に沿って間欠的切り込み又は孔（いわゆるミシン目状のもの）で形成した切断線9bを設けてある。

【0011】 前後身頃1、2の接合部8の接合強度（剥離強度）は、1000g/インチ以上であることが好ましい。これは、前述のように、前後身頃1、2の胴回り対向側部3、4を接合することで形成した胴開口部をオムツの着用に際して広げたり、オムツの着用中や、切断線9bで後身頃2から前身頃1を切り離すため引っ張った際に、接合部8に対向側部3、4が互いに剥離するような引裂力が加わったりした場合、接合部8で接合する対向側部3、4が互いに剥離するのを防止するためである。なお、剥離強度は、図8に示すように、実施例のオムツから鎖線で囲む部分を、即ち、幅1インチ、接合部

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を中心として長さ方向へそれぞれ10mm以上に切り取って試験片とし、両チャックの間が試験片の接合部を中心にして20mmになるように両チャックで試験片の両端を挟み、試験片の長さ方向へ100mm/minの速度で引っ張り、接合部8が剥離するまでの値(g)を測定することを得る。

【0012】図1、図2及び図8において、前後身頃1、2の胴回りの裾の対向側には身開口部のための凹曲線10を形成してある。前後身頃1、2は、図7に示すように、透液性内面シート11と不透液性外面シート12との間に砂時計型に形成した吸液性パネル13を介在させることで構成してある。前後身頃1、2の胴回り部及び胴回り部における内外面シート11、12の間には複数条の糸状弾性部材14、15をその長さ方向への伸長下にホットメルトタイプの接着剤で並列に取り付けてある。後身頃2の胴回り部における弾性部材14は、その胴回り部のほぼ全域にその外端から内側へ並列間隔を大きくし、これによってその胴回り部における弾性部材14の全体としての伸縮弾性強度を前身頃1の胴回り部における弾性部材14のそれよりも高くしてある。しかし、図示していないが、前後身頃1、2の胴回り部における糸状弾性部材14を取り付けることなく、後身頃2の胴回りの一部を弾性布片で構成してもよい。この場合には、例えば、後身頃2の胴回りの幅(横)方向対向側縁に該布片を縫着手段などで連結してもよい。又、図示していないが、締結片6の全体、又は一部を弾性部材で構成してもよい。

【0013】前身頃1の胴回り部の外面には、締結片6に係着部5を繰り返し係着するための補強と、係着部5の係着位置を示すのに便利なインジケータとの両機能を果たすため、スケール目盛を表示した帯状シート16を貼着してある。係着部5は公知の粘着剤の塗布で形成するほか、公知のベルクロ(商標)又はマジックテープ(商標)のようなフック群を有するテープの切断片であってもよいが、この場合、帯状シート16にそのフックが係合することが可能なバイル状毛羽を表面に有するものを使用する。

【0014】締結片6には不織布又はこれとプラスチックフィルム若しくは上質紙とのラミネートシート、内面シート11には不織布又は多孔性プラスチックフィルム、外面シート12にはプラスチックフィルム又はこれと不織布とのラミネートシート、帯状シート16には、係着部5の性質に応じて、プラスチックフィルム又は不織布若しくはフェルトを使用する。

【0015】以上の構成を有するこの発明に係るオムツ

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では、例えば、着用者を起立させてオムツを着用させるのがよい場合、予めパンツ型になっているオムツをそのまま使用する。このとき、締結片6は、不要であるが、係着部5で帯状シート16に接合し、オムツの着用中に衰りに動かないようにする(図4参照)。一方、例えば、オムツの着用者を横臥させてオムツを着用させるのがよい場合、前身頃1又は締結片6を引っ張って切断線9bに沿って引き裂いて前身頃1の対向側部を後身頃2のそれから切り離すことで開放型のオムツになし(図6参照)、着用させた状態で、締結片6に係着部5で帯状シート16の適宜部位に接合する(図5参照)。

【0016】

【発明の効果】この発明に係るオムツによれば、パンツ型又は開放型のいずれかの着用方法を選択できる。特に、オムツの対向側部における接合部の剥離強度を1000g/インチ以上になしてあるから、その対向側部が接合したパンツ型として使用するとき、その接合部に通常の引裂力が加わっても、その対向側部が互いに剥離することがない。

【0017】大便がオムツに排泄された場合、前身頃に設けた切断線からその対向側部を後身頃のそれから切り離し、大便で着用者の肌を衰りに汚すことなく着用者から極めて容易にオムツを脱がすことができる。

【図面の簡単な説明】

【図1】一方の締結片を前身頃に接合して組み立てたオムツの正面図。

【図2】組み立てたオムツの背面図。

【図3】前後身頃の側部と締結片の基端部との接合部の拡大断面図。

【図4】組み立てたオムツの上端面図。

【図5】前身頃の対向側部を後身頃のそれから切り離して組み立てたオムツの上端面図。

【図6】展開したオムツの内側平面図。

【図7】図6のX-X線に沿う拡大断面図。

【図8】試験片の接合部の剥離強度の測定方法。

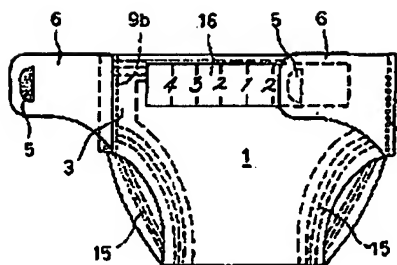
【符号の説明】

- 1 前身頃
- 2 後身頃
- 3、4 側部
- 5 係着部
- 6 締結片
- 7 基端部
- 8 接合部
- 9b 切断線

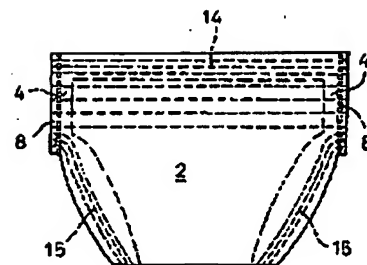
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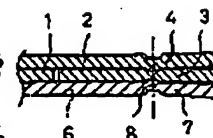
【図1】



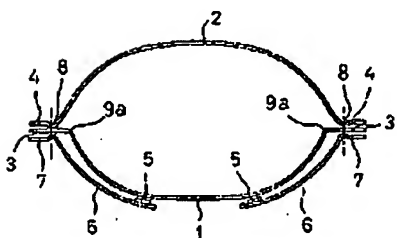
【図2】



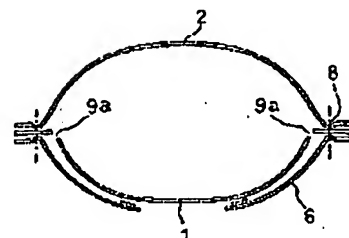
【図3】



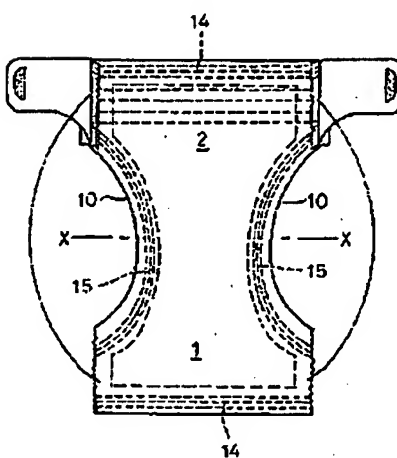
【図4】



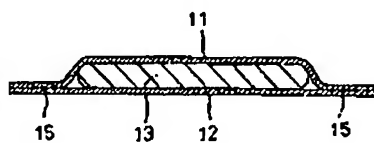
【図5】



【図6】



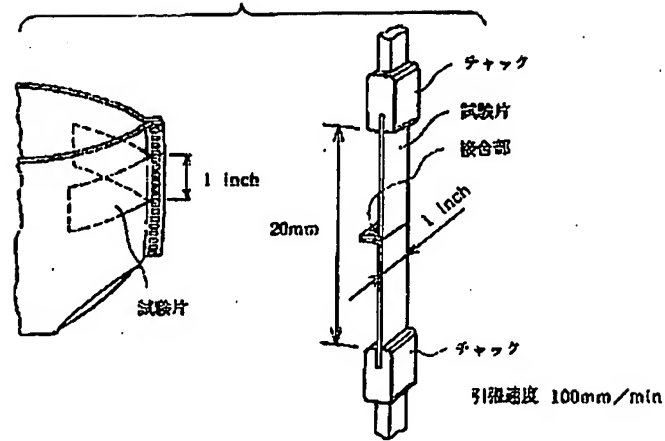
【図7】



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【図8】



FULL CONTENTS

[Claim(s)]

[Claim 1] In the disposable diaper which has the piece of conclusion which past time and later self time continue in these die-length directions mutually, and extends outside to one circumference opposite flank of a barrel of a this order bodice Pile up mutually the opposite flank of the circumference of the barrel of said order bodice, and the end face part of each piece of conclusion which prepared the engagement part in the inner surface of the point further is laid on top of the circumference opposite flank of a barrel at said past time, respectively. Join these superposition part to one and the line of cutting plane for separating said past time from said back bodice along with these junctions is formed in the part at said past time which is an inner side [junctions / these] and approaches these junctions, respectively. Said diaper characterized by having made the peel strength of said junction of said order bodices in 1000g/inch or more.

[Claim 2] It is the diaper according to claim 1 with which joining of said junction is formed by weld and nothing and said line of cutting plane are formed by the intermittent cut or the pore.

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the disposable diaper which can choose one as a diaper of the open type which connects the circumference of a barrel annularly by the piece of conclusion at the time of the trousers type diaper which has connected the circumference of a barrel annularly beforehand, or wear of the wear approaches in more detail about a disposable diaper.

[0002]

[Description of the Prior Art] It is a disposable diaper, one side of the circumference opposite flank of a barrel of an order bodice is beforehand joined to publication of unexamined utility model application Heisei 4-5826, and what joined the another side possible [opening and closing] with the tape fastener is indicated. Moreover, it is a disposable diaper and what enabled opening and closing at least of one side of the circumference opposite flank of a barrel of an order bodice with pressure sensitive adhesive tape is indicated by JP,4-89050,A.

[0003]

[Problem to be solved by the invention] Since the diaper given in publication of unexamined utility model application Heisei 4-5826 is made the architecture which always closed one side of the crosswise opposite flank of a diaper, it is inconvenient to make a wearer wear a diaper also in the state of any of standing up of a wearer and lying down. moreover, [JP,4-89050,A / the diaper of a description] Among the circumference opposite flanks of a barrel of a diaper, [the flank which can be opened and closed] When making a wearer wear a diaper, extending the barrel opening arbitrarily like [since it has joined with pressure sensitive adhesive tape from the beginning (since the time of manufacture of a diaper)] the usual trousers which have connected the circumference of

a barrel, It opens carelessly and there is a possibility that the effect made the architecture which connected the circumference opposite flank of a barrel of trousers with the trousers type beforehand may be halved.

[0004] There is a technical problem of this invention in constituting that opposite flank so that that opposite flank is joined from the manufacture time of a diaper, nevertheless that junction may be detached if needed and it can join again so that the junction by the side of that opposite may not open, even if it extends barrel opening arbitrarily when wearing.
[0005]

[Means for solving problem] Past time and later self time continue in these die-length directions mutually, and this invention is characterized by the following point a premise [the disposable diaper which has the piece of conclusion which extends outside to one circumference opposite flank of a barrel of a this order bodice].

[0006] Namely, pile up mutually the circumference opposite flank of a barrel of said order bodice, and the end face part of each piece of conclusion which prepared the engagement part at the head further is laid on top of the circumference opposite flank of a barrel at said past time, respectively. Join these superposition part to one and the line of cutting plane for separating said past time from said back bodice along with these junctions to the part at said past time which is an inner side [junctions / these] and approaches these junctions, respectively is formed. The point of having made the peel strength of the junction of said order bodice in 1000g/inch or more.

[0007] In the desirable work example, joining of said junction is formed by weld and nothing and said line of cutting plane are formed by the intermittent cut or the pore.

[0008]

[Function] When detaching the opposite flank of a diaper, or one of these and using a diaper as an open type, in said line of cutting plane, it is said back bodice and the opposite flank at said past time can be separated. In this way, it can connect with said back bodice at said separated past time through the piece of conclusion which extends from the opposite side of said back bodice.

[0009]

[Working example] It is as follows when the work example of this invention is explained with reference to the example of a graphic display.

[0010] In drawing 1 - drawing 5 ; as for the diaper, the order bodices 1 and 2 are continuing in these die-length directions mutually. Pile up the opposite flanks 3 and 4 of the circumference of the barrel of the order bodices 1 and 2, and the end face part 7 of the piece 6 of conclusion which formed the adherence part 5 as an engagement part in the inner surface of the point further is piled up. In these superposition part, it leaves the side edge of these superposition part under heat or an ultrasonic operation, weld joining has been intermittently carried out along with this side edge at one, and a code 8 shows that junction. At the past time close to a junction 8, the line of cutting plane 9b formed along with the junction 8 by the intermittent cut or the pore (what is called a perforation form thing) is provided in the part 9a of 1 so that 1 may be pulled at the past time and it can separate from the back bodice 2.

[0011] As for the joining reinforcement (peel strength) of the junction 8 of the order bodices 1 and 2, it is desirable that it is 1000g/inch or more. [opening / this / this extends barrel opening formed as mentioned above by joining the circumference opposite flanks 3 and 4 of a barrel of the order bodices 1 and 2 on the occasion of wear of a diaper, or]

When it pulls in order to separate 1 from 2 with a line of cutting plane 9b at the past time ~~at the later self time, the inside of wear~~ of a diaper, and and tear strength that the opposite flanks 3 and 4 exfoliate mutually in a junction 8 is added, it is for preventing that the opposite flanks 3 and 4 joined by a junction 8 exfoliate mutually. [in addition, the part surrounded with a chain line from the diaper of a work example as peel strength is shown in drawing 8] Namely, cut off to 10mm or more in the die-length direction focusing on 1 inch in width, and a junction, respectively, and it is considered as a test piece. It obtains by measuring a value (g) until it gathers the ends of a test piece by both zippers so that between both zippers may be set to 20mm focusing on the junction of a test piece, and it pulls at the rate of 100 mm/min in the die-length direction of a test piece and a junction 8 exfoliates.

[0012] In drawing 1 , drawing 2 , and drawing 6 , the concave bend edge 10 for base opening is formed in the opposite side between the circumferences of the barrel of the order bodices 1 and 2. The order bodices 1 and 2 consist of making the absorbent panel 13 formed in the sandglass type intervene between the liquid-permeable inner sheet 11 and the non-liquid-permeable nature outside surface seat 12, as shown in drawing 7 . Among the inside-and-outside side seats 11 and 12 in the circumference part of a barrel of the order bodices 1 and 2, and the circumference part of a base, the filar elastic members 14 and 15 of two or more articles are attached in parallel with the hot melt type adhesive bond under the extension to the die-length direction. The elastic member 14 in the circumference part of a barrel of the back bodice 2 is made higher than that of the elastic member [in / at the past time / for the elastic elastic reinforcement as the whole elastic member / in / a parallel interval is mostly enlarged from the outer edge to an inner side in the whole region, and / by this / the circumference part of the barrel / 14 of the circumference part of the barrel / the circumference part of a barrel of 1] 14. However, although not illustrated, the portion of the circumference of the barrel of 2 may consist of pieces of an elastic cloth at the later self time, without attaching the filar elastic member 14 in the circumference part of a barrel of the order bodices 1 and 2. In this case, you may connect this piece of cloth with the width (width) direction opposite side edge of the circumference of the barrel of 2 with a weld means etc. at the later self time, for example. Moreover, although not illustrated, the whole piece 6 of conclusion or a portion may consist of elastic members.

[0013] In order to achieve both the functions of the reinforcement for repeating the engagement part 5 of the piece 6 of conclusion on the outside surface of the circumference part of a barrel of 1, and engaging with it at the past time, and an indicator useful to show the engagement position of the engagement part 5, the belt sheet 16 which displayed the scale scale is stuck. Although the engagement part 5 is formed by the application of a well-known adhesive and also it may be a piece of cutting of a tape which has well-known Velcro (trademark) or a hook group like a piece of Velcro (trademark), what has on the surface the pile form fluff which can be engaged with the belt sheet 16 by that hook in this case is used.

[0014] To the piece 6 of conclusion, a nonwoven fabric, this and a plastic film, or a laminate sheet with paper of fine quality, On a nonwoven fabric or a porous plastic film, and the outside seat 12, it responds to the laminate sheet of a plastic film, or a this and a nonwoven fabric at the inner surface seat 11, responds to the belt sheet 16 at the characteristic of the engagement part 5, and a plastic film, a nonwoven fabric, or felt is

used.

[0015] In the diaper concerning this invention that has the above architecture, when good [to make a wearer stand up and to make a diaper wear for example], the diaper which is a trousers type beforehand is used as it is. Although the piece 6 of conclusion is unnecessary at this time, it joins to the belt sheet 16 and is made not to move by the engagement part 5 indiscriminately during wear of a diaper (refer to drawing 4). On the other hand, for example, when good [to lay the wearer of a diaper and to make a diaper wear], The piece 6 of conclusion is joined to the proper part of the belt sheet 16 in the engagement part 5 by nothing (refer to drawing 6) to the diaper of an open type, and the state where it was made to wear, by pulling 1 or the piece 6 of conclusion at the past time, tearing along with a line of cutting plane 9b, being 2 at the later self time, and separating the opposite flank of 1 at the past time, (refer to drawing 5).

[0016]

[Effect of the Invention] According to the diaper concerning this invention, the wear approach of either a trousers type or an open type can be chosen. Since the peel strength of the junction in the opposite flank of a diaper is especially made [inch] in 1000g /or more, when using it as a trousers type which the opposite flank joined, even if the usual tear strength is added to the junction, the opposite flank does not exfoliate mutually.

[0017] When excrement is excreted by the diaper, in a diaper, ** can do ***** very easily from a wearer, without separating and soiling a wearer's skin indiscriminately by excrement from the line of cutting plane formed at the past time, and it is at the later self time about the opposite flank.

[Brief Description of the Drawings]

[Drawing 1] The front view of the diaper which joined and assembled one piece of conclusion at the past time.

[Drawing 2] The rear elevation of the assembled diaper.

[Drawing 3] The expanded sectional view of the junction of the flank of an order bodice, and the end face part of the piece of conclusion.

[Drawing 4] The upper end elevation of the assembled diaper.

[Drawing 5] It is the upper end elevation of the diaper at the later self time separated and assembled about the opposite flank at the past time.

[Drawing 6] The inner side top view of the developed diaper.

[Drawing 7] The expanded sectional view which meets the X-X line of drawing 6 .

[Drawing 8] The measuring method of the peel strength of the junction of a test piece.

[Explanations of letters or numerals]

1 Past Time

2 Later Self Time

3, 4 Flank

5 Engagement Part

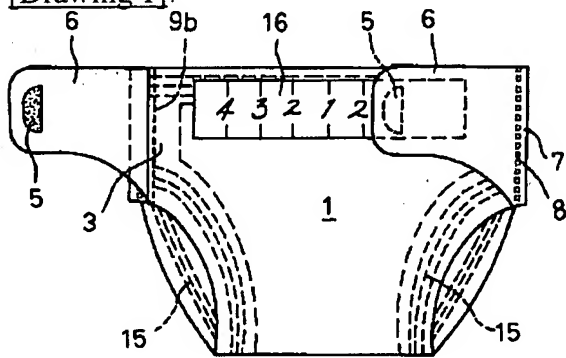
6 Piece of Conclusion

7 End Face Part

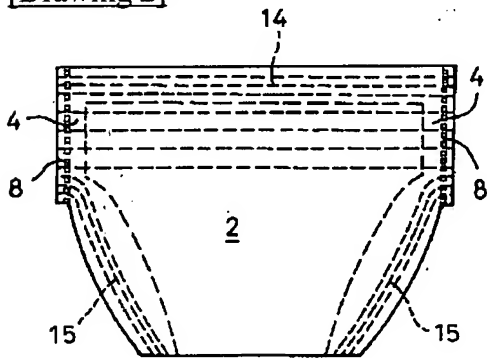
8 Junction

9b Line of cutting plane

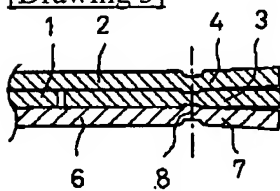
[Drawing 1]



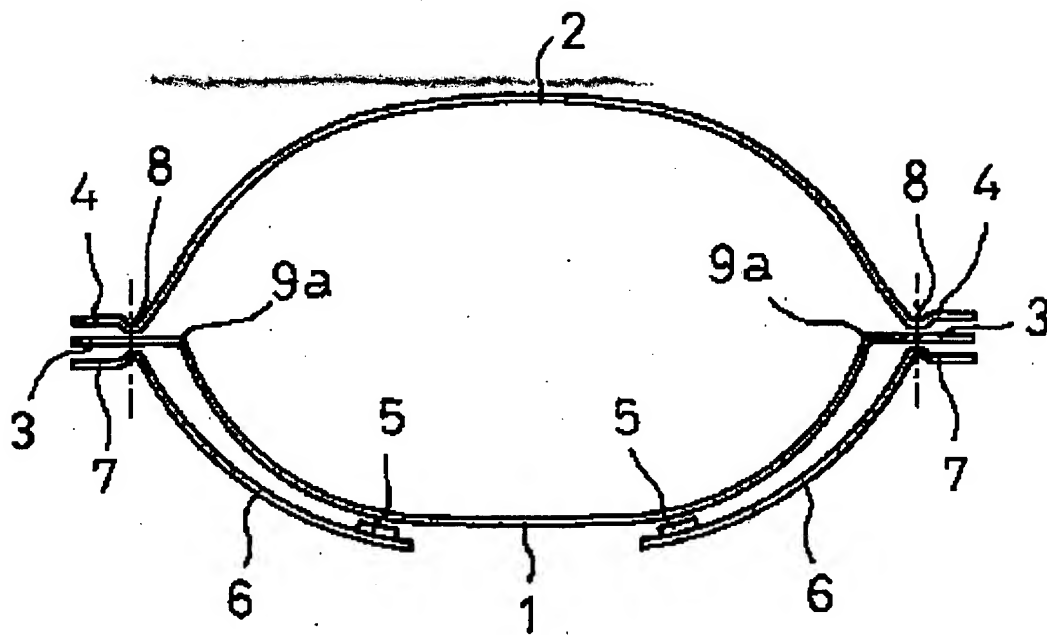
[Drawing 2]



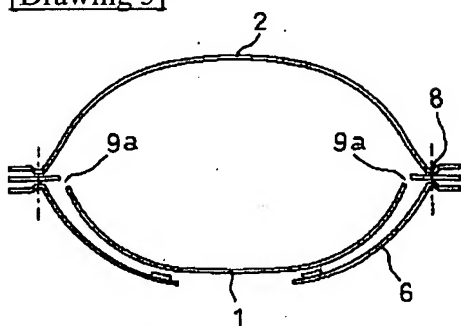
[Drawing 3]



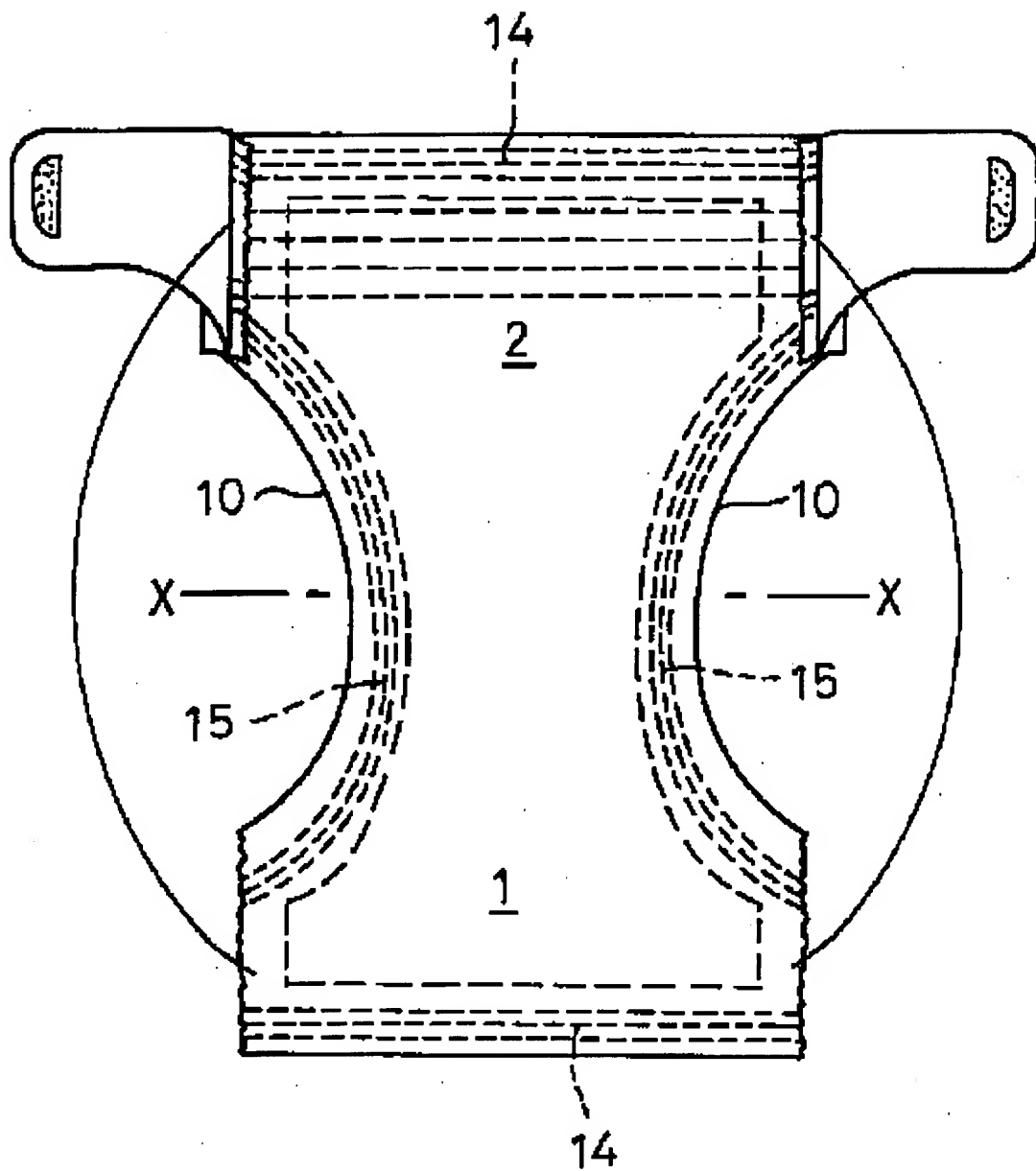
[Drawing 4]



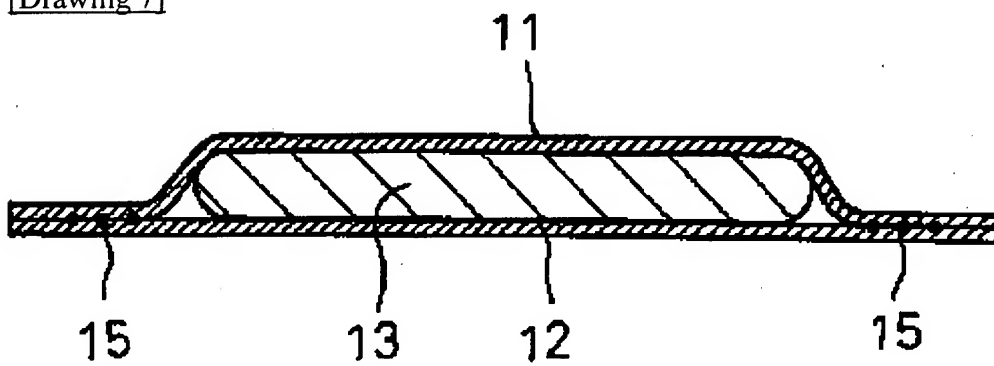
[Drawing 5]



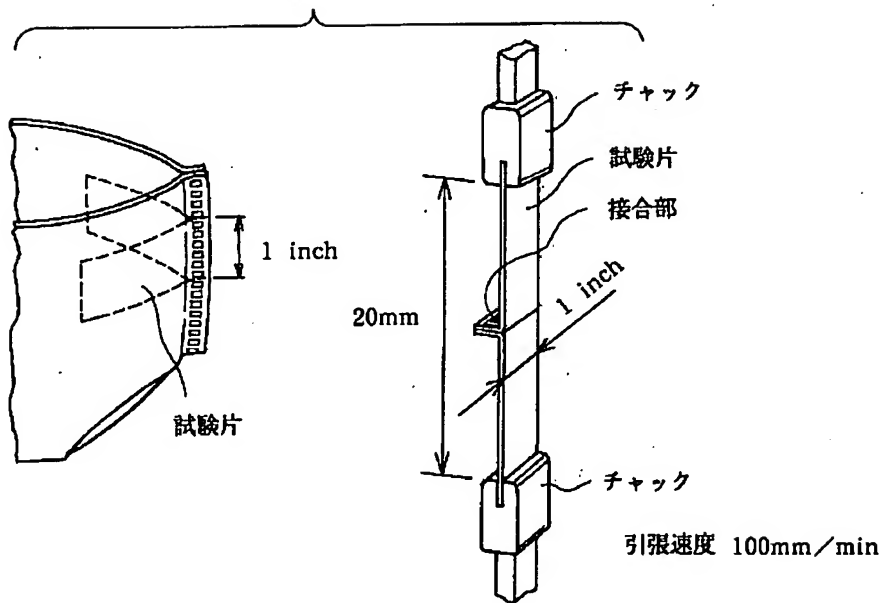
[Drawing 6]



[Drawing 7]



[Drawing 8]



[Translation done.]